3GPP TSG CT Plenary Meeting #28 **CP-050156**
01-03 June 2005, Quebec, CANADA

Source: **CT5 (OSA)**

Title: **2 Rel-5/6 CR 29.198-13**

Agenda item: **8.2 (OSA Enhancements [OSA2])**

Document for: **APPROVAL**

Doc-1st-Level	Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Doc-2nd-Level	Workitem
CP-050156	29.198-13	0013	-	Rel-5	Correct references to PCIM RFCs	F	5.6.1	C5-050241	OSA2
CP-050156	29.198-13	0014	-	Rel-6	Correct references to PCIM RFCs	A	6.2.2	C5-050242	OSA2

CR-Form-v7.1

CHANGE REQUEST

⌘ **29.198-13** **CR** **0013** ⌘ **rev** **-** ⌘ Current version: **5.6.1** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Correct references to PCIM RFCs
Source:	⌘	CT5 Ultan Mulligan, ETSI PTCC
Work item code:	⌘	OSA2
Date:	⌘	25/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Clause 8.8 of the Policy Management SCF contain references to clause 5.4 of the same document, which is clearly incorrect. Clause 5.4 is a sequence diagram entitled “Create and modify domain”. These references should refer to clause 5.4 of RFC 3060, the Policy Core Information Model. There is a further incorrect reference to a missing document [8] which should be made to RFC 2591.
Summary of change:	⌘	Include references to RFC 3060 and RFC 2591 in clause 2. Add abbreviations PCIM and CIM. Refer correctly to these RFCs in clause 8.8
Consequences if not approved:	⌘	The Policy Management SCF specification will contain references which are confusing and impossible for developers to decrypt. The references are intended to explain concepts in the specification, but if the references are incorrect or missing, these concepts are never explained.

Clauses affected:	⌘	2, 3.2, 8.8			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	29.198-13 Rel-6
		X /	Other core specifications		
		/ X	Test specifications		
		/ X	O&M Specifications		
Other comments:	⌘	Rel-6 Mirror CR TS 29.198-13 in C5-050241.			

Change in Clause 2

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TS 29.198-1: "Open Service Access; Application Programming Interface; Part 1: Overview".

[2] 3GPP TS 22.127: "Service Requirement for the Open Services Access (OSA); Stage 1".

[3] 3GPP TS 23.127: "Virtual Home Environment (VHE) / Open Service Access (OSA)".

[4] IETF RFC 2445: "Internet Calendaring and Scheduling Core Object Specification (iCalendar)".

[5] IETF RFC 3060: PCIM, "Policy Core Information Model -- Version 1 Specification".

[6] IETF RFC 2591: "Definitions of Managed Objects for Scheduling Management Operations".

[7] DMTF CIM: “Common Information Model” http://www.dmtf.org/spec/cims.html

End of change in Clause 2

Change in Clause 3

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TS 29.198-1 [1] apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TS 29.198-1 [1] apply, in addition to those given below:

CIM DMTF Common Information Model.
DMFT Distributed Management Task Force
PCIM Policy Core Information Model, as defined in RFCs 3060 and 3460.

End of change in Clause 3

Change in Clause 8.8

8.8 Interface Class IpPolicyTimePeriodCondition

Inherits from: IpPolicyCondition.

This class provides a means of representing the time periods during which a policy rule is valid, i.e., active. At all times that fall outside these time periods, the policy rule has no effect. A policy rule is treated as valid at all times if it does not specify a PolicyTimePeriodCondition.

In some cases a PDP may need to perform certain setup / cleanup actions when a policy rule becomes active / inactive. For example, sessions that were established while a policy rule was active might need to be taken down when the rule becomes inactive. In other cases, however, such sessions might be left up: in this case, the effect of deactivating the policy rule would just be to prevent the establishment of new sessions. Setup / cleanup behaviours on validity period transitions are not currently addressed by the PCIM, and must be specified in 'guideline' documents, or via subclasses of PolicyRule, PolicyTimePeriodCondition or other concrete subclasses of Policy. If such behaviours need to be under the control of the policy administrator, then a mechanism to allow this control must also be specified in the subclass.

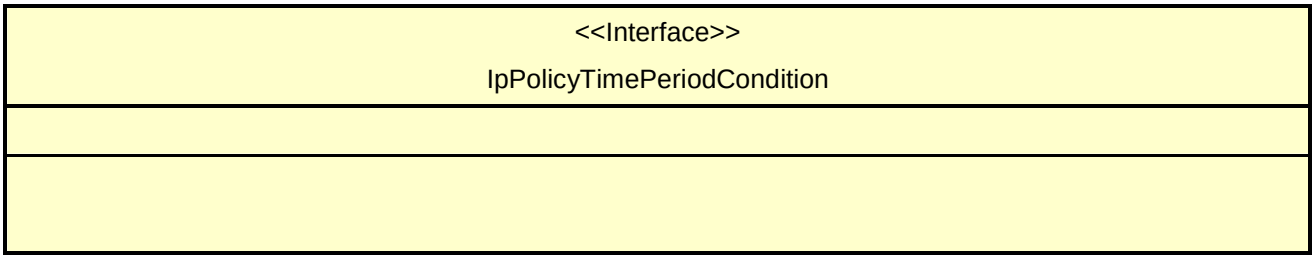
PolicyTimePeriodCondition is defined as a subclass of PolicyCondition. This is to allow the inclusion of time-based criteria in the AND/OR condition definitions for a PolicyRule.

Instances of this class may have up to five attributes identifying time periods at different levels. The values of all the attributes present in an instance are ANDed together to determine the validity period(s) for the instance. For example, an instance with an overall validity range of January 1, 2000 through December 31, 2000; a month mask that selects March and April; a day-of-the-week mask that selects Fridays; and a time of day range of 0800 through 1600 would represent the following time periods:

Friday, March 5, 2000, from 0800 through 1600;
Friday, March 12, 2000, from 0800 through 1600;
Friday, March 19, 2000, from 0800 through 1600;
Friday, March 26, 2000, from 0800 through 1600;
Friday, April 2, 2000, from 0800 through 1600;
Friday, April 9, 2000, from 0800 through 1600;
Friday, April 16, 2000, from 0800 through 1600;
Friday, April 23, 2000, from 0800 through 1600;
Friday, April 30, 2000, from 0800 through 1600.

Attributes not present in an instance of PolicyTimePeriodCondition are implicitly treated as having their value "always enabled". Thus, in the example above, the day-of-the-month mask is not present, and so the validity period for the instance implicitly includes a day-of-the-month mask that selects all days of the month. If we apply this "missing attribute" rule to its fullest, we see that there is a second way to indicate that a policy rule is always enabled: have it point to an instance of PolicyTimePeriodCondition whose only attributes are its naming attributes.

The attribute LocalOrUtcTime indicates whether the times represented in the other five time-related attributes of an instance of PolicyTimePeriodCondition are to be interpreted as local times for the location where a policy rule is being applied, or as UTC times.



8.8.1 Attributes

CommonName : TpString

The identifier used to distinguish instances of a give class of objects within a container. It is defined and referenced by the 'name' parameter used in most API methods.

PolicyKeywords : TpStringSet

This attribute provides a set of one or more keywords that a policy administrator may use to assist in characterizing or categorizing a policy object. Keywords are of one of two types:

- Keywords defined in the present document, or in documents that define subinterfaces of the interfaces defined in the present document. These keywords provide a vendor-independent, installation-independent way of characterizing policy objects.

- Installation-dependent keywords for characterizing policy objects. Examples include "Engineering", "Billing", and "Review in December 2000".

The present document defines the following keywords: "P_PM_KEYWORD_UNKNOWN", "P_PM_KEYWORD_CONFIGURATION", "P_PM_KEYWORD_USAGE", "P_PM_KEYWORD_SECURITY", "P_PM_KEYWORD_SERVICE", "P_PM_KEYWORD_MOTIVATIONAL", "P_PM_KEYWORD_INSTALLATION", and "P_PM_KEYWORD_EVENT". These concepts were originally defined in [PCIM].

One additional keyword is defined: "P_PM_KEYWORD_POLICY". The role of this keyword is to identify policy-related instances that would not otherwise be identifiable as being related to policy. It may be needed in some repository implementations.

Documents that define subinterfaces of the Policy Information Model interfaces SHOULD define additional keywords to characterize instances of these subinterfaces. By convention, keywords defined in conjunction with interface definitions are in uppercase. Installation-defined keywords can be in any case.

Caption : TpString

This attribute provides a one-line description of a policy-related object.

Description : TpString

This attribute provides a longer description than that provided by the caption attribute.

TimePeriod : TpString

This attribute identifies an overall range of calendar dates and times over which a policy rule is valid. It reuses the format for an explicit time period defined in RFC 2445: a string representing a starting date and time, in which the character 'T' indicates the beginning of the time portion, followed by the solidus character '/', followed by a similar string representing an end date and time. The first date indicates the beginning of the range, while the second date indicates the end. Thus, the second date and time must be later than the first. Date/times are expressed as substrings of the form "yyyymmddThhmmss". For example:

20000101T080000/20000131T120000

January 1, 2000, 0800 through January 31, 2000, noon

There are also two special cases in which one of the date/time strings is replaced with a special string defined in

RFC 2445.

- If the first date/time is replaced with the string "THISANDPRIOR", then the attribute indicates that a policy rule is valid [from now] until the date/time that appears after the '/'.

- If the second date/time is replaced with the string "THISANDFUTURE", then the attribute indicates that a policy rule becomes valid on the date/time that appears before the '/', and remains valid from that point on.

Note that RFC 2445 does not use these two strings in connection with explicit time periods. Thus the PCIM is combining two elements from RFC 2445 that are not combined in the RFC itself.

MonthOfYearMask : TpString

The purpose of this attribute is to refine the definition of the valid time period that is defined by the TimePeriod attribute, by explicitly specifying the months when the policy is valid. These attributes work together, with the TimePeriod used to specify the overall time period during which the policy might be valid, and the MonthOfYearMask used to pick out the specific months within that time period when the policy is valid.

This attribute is formatted as an octet string of size 2, consisting of 12 bits identifying the 12 months of the year, beginning with January and ending with December, followed by 4 bits that are always set to '0'. For each month, the value '1' indicates that the policy is valid for that month, and the value '0' indicates that it is not valid. The value X'08 30', for example, indicates that a policy rule is valid only in the months May, November, and December.

See ~~section~~ clause 5.4 of RFC 3060 for details of how CIM represents a single-valued octet string attribute such as this one. (Basically, CIM prepends a 4-octet length to the octet string.)

If this attribute is omitted, then the policy rule is treated as valid for all twelve months.

DayOfMonthMask : TpString

The purpose of this attribute is to refine the definition of the valid time period that is defined by the TimePeriod attribute, by explicitly specifying the days of the month when the policy is valid. These attributes work together, with the TimePeriod used to specify the overall time period during which the policy might be valid, and the DayOfMonthMask used to pick out the specific days of the month within that time period when the policy is valid.

This attribute is formatted as an octet string of size 8, consisting of 31 bits identifying the days of the month counting from the beginning, followed by 31 more bits identifying the days of the month counting from the end, followed by 2 bits that are always set to '0'. For each day, the value '1' indicates that the policy is valid for that day, and the value '0' indicates that it is not valid.

The value X'80 00 00 01 00 00 00 00', for example, indicates that a policy rule is valid on the first and last days of the month.

For months with fewer than 31 days, the digits corresponding to days that the months do not have (counting in both directions) are ignored.

The encoding of the 62 significant bits in the octet string matches that used for the schedDay object in the DISMAN-SCHEDULE-MIB. See ~~reference [8]~~RFC 2591 for more details on this object.

See ~~section~~ clause 5.4 of RFC 3060 for details of how CIM represents a single-valued octet string attribute such as this one. (Basically, CIM prepends a 4-octet length to the octet string.)

DayOfWeekMask : TpString

The purpose of this attribute is to refine the definition of the valid time period that is defined by the TimePeriod attribute by explicitly specifying the days of the week when the policy is valid. These attributes work together, with the TimePeriod used to specify the overall time period when the policy might be valid, and the DayOfWeekMask used to pick out the specific days of the week in that time period when the policy is valid.

This attribute is formatted as an octet string of size 1, consisting of 7 bits identifying the 7 days of the week, beginning with Sunday and ending with Saturday, followed by 1 bit that is always set to '0'. For each day of the week, the value '1' indicates that the policy is valid for that day, and the value '0' indicates that it is not valid.

The value X'7C', for example, indicates that a policy rule is valid Monday through Friday.

See ~~section~~ clause 5.4 of RFC 3060 for details of how CIM represents a single-valued octet string attribute such as this one. (Basically, CIM prepends a 4-octet length to the octet string.)

TimeOfDayMask : TpString

The purpose of this attribute is to refine the definition of the valid time period that is defined by the TimePeriod attribute by explicitly specifying a range of times in a day the policy is valid for. These attributes work together, with the TimePeriod used to specify the overall time period that the policy is valid for, and the TimeOfDayMask used to pick out which range of time periods in a given day of that time period the policy is valid for.

This attribute is formatted in the style of RFC 2445 ~~[10]~~: a time string beginning with the character 'T', followed by the solidus character '/', followed by a second time string. The first time indicates the beginning of the range, while the second time indicates the end. Times are expressed as substrings of the form "Thhmmss".

The second substring always identifies a later time than the first substring. To allow for ranges that span midnight, however, the value of the second string may be smaller than the value of the first substring. Thus, "T080000/T210000" identifies the range from 0800 until 2100, while "T210000/T080000" identifies the range from 2100 until 0800 of the following day.

When a range spans midnight, it by definition includes parts of two successive days. When one of these days is also selected by either the MonthOfYearMask, DayOfMonthMask, and/or DayOfWeekMask, but the other day is not, then the policy is active only during the portion of the range that falls on the selected day. For example, if the range extends

from 2100 until 0800, and the day of week mask selects Monday and Tuesday, then the policy is active during the following three intervals:

From midnight Sunday until 0800 Monday;

From 2100 Monday until 0800 Tuesday;

From 2100 Tuesday until 23:59:59 Tuesday.

`LocalOrUtcTime : TpInt32`

This attribute indicates whether the times represented in the TimePeriod attribute and in the various Mask attributes represent local times or UTC times. There is no provision for mixing of local times and UTC times: the value of this attribute applies to all of the other time-related attributes. Note that LocalTime is designated by the integer 1 and UtcTime by the integer 2. If no value is specified the default value is 2, i.e., UtcTime is used.

End of change in Clause 8.8

Annex C (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
April 2002	--	--	--	--	Draft v100 submitted to TSG CN email list for Information	--	1.0.0
June 2002	CN_16	NP-020195	--	--	Draft v200 submitted to TSG CN#16 for Approval	2.0.0	5.0.0
Sep 2002	CN_17	NP-020439	001	--	Add text to clarify requirements on support of methods	5.0.0	5.1.0
Sep 2002	CN_17	NP-020395	002	--	Add text to clarify relationship between 3GPP and ETSI/Parlay OSA specifications	5.0.0	5.1.0
Sep 2003	CN_21	NP-030352	004	--	Correction to Java Realisation Annex	5.1.0	5.2.0
Dec 2003	CN_22	NP-030548	006	--	Correction of standard datatypes supported by TpPolicy - Align with 29.198-02	5.2.0	5.3.0
Apr 2004	CN_23bis	NP-040155	008	--	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	5.3.0	5.4.0
Jun 2004	CN_24	NP-040262	009	--	Correct Java Rulebook	5.4.0	5.5.0
Sep 2004	CN_25	NP-040355	011	--	Correct J2EE source	5.5.0	5.6.0
Dec 2004	--	--	--	--	OSA Stage 1 & 2 References clean-up	5.6.0	5.6.1

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CHANGE REQUEST

⌘ **29.198-13** **CR** **0014** ⌘ **rev** **-** ⌘ Current version: **6.2.2** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Correct references to PCIM RFCs
Source:	⌘	CT5 Ultan Mulligan, ETSI PTCC
Work item code:	⌘	OSA2
Date:	⌘	25/04/2005
Category:	⌘	**A**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
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Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Clause 8.1.8 of the Policy Management SCF contain references to clause 5.4 of the same document, which is clearly incorrect. Clause 5.4 is a sequence diagram entitled “Create and modify domain”. These references should refer to clause 5.4 of RFC 3060, the Policy Core Information Model. There is a further incorrect reference which should be made to RFC 2591.
Summary of change:	⌘	Include references to RFC 3060 and RFC 2591 in clause 2. Add abbreviations PCIM and CIM. Refer correctly to these RFCs in clause 8.1.8
Consequences if not approved:	⌘	The Policy Management SCF specification will contain references which are confusing and impossible for developers to decrypt. The references are intended to explain concepts in the specification, but if the references are incorrect or missing, these concepts are never explained.

Clauses affected:	⌘	2, 3.2, 8.1.8

Other specs affected: ⌘	Y	N		⌘
		X	Other core specifications	
		X	Test specifications	
		X	O&M Specifications	

Other comments:	⌘	Rel-6 Mirror CR of TS 29.198-13 in C5-050242.

Change in Clause 2

2 References

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[1] 3GPP TS 29.198-1: "Open Service Access; Application Programming Interface; Part 1: Overview".

[2] 3GPP TS 22.127: "Service Requirement for the Open Service Access (OSA); Stage 1".

[3] 3GPP TS 23.198: "Open Service Access (OSA); Stage 2".

[4] IETF RFC 3460: PCIM, "Policy Core Information Model (PCIM) Extensions".

[5] IETF RFC 2445: "Internet Calendaring and Scheduling Core Object Specification (iCalendar)".

[6] IETF RFC 3060: PCIM, "Policy Core Information Model -- Version 1 Specification".

[7] IETF RFC 2591: "Definitions of Managed Objects for Scheduling Management Operations".

[8] DMTF CIM: “Common Information Model” http://www.dmtf.org/spec/cims.html

End of change in Clause 2

Change in Clause 3

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TS 29.198-1 [1] apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TS 29.198-1 [1] apply, in addition to those given below:

CIM DMTF Common Information Model
DMFT Distributed Management Task Force
PCIM Policy Core Information Model, as defined in RFCs 3060 and 3460.

End of change in Clause 3

Change in Clause 8.1.8

8.1.8 Interface Class IpPolicyTimePeriodCondition

Inherits from: IpPolicyCondition.

This class provides a means of representing the time periods during which a policy rule is valid, i.e., active. At all times that fall outside these time periods, the policy rule has no effect. A policy rule is treated as valid at all times if it does not specify a PolicyTimePeriodCondition.

In some cases a PDP may need to perform certain setup / cleanup actions when a policy rule becomes active / inactive. For example, sessions that were established while a policy rule was active might need to be taken down when the rule becomes inactive. In other cases, however, such sessions might be left up: in this case, the effect of deactivating the policy rule would just be to prevent the establishment of new sessions. Setup / cleanup behaviours on validity period transitions are not currently addressed by the IETF RFC 3460, and must be specified in 'guideline' documents, or via subclasses of PolicyRule, PolicyTimePeriodCondition or other concrete subclasses of Policy. If such behaviours need to be under the control of the policy administrator, then a mechanism to allow this control must also be specified in the subclass.

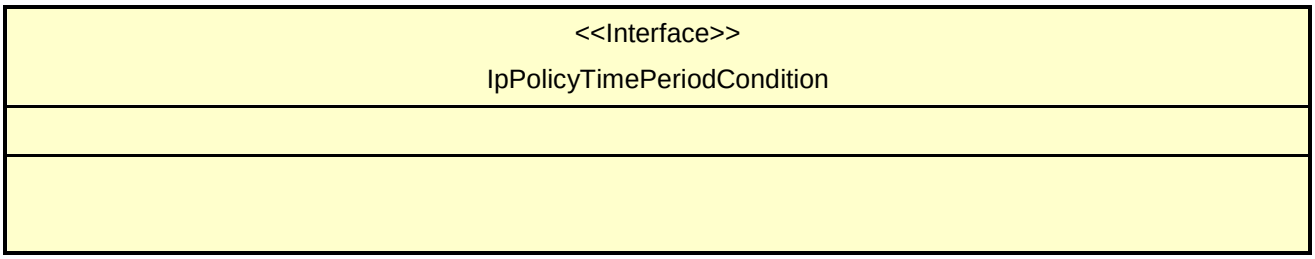
PolicyTimePeriodCondition is defined as a subclass of PolicyCondition. This is to allow the inclusion of time-based criteria in the AND/OR condition definitions for a PolicyRule.

Instances of this class may have up to five attributes identifying time periods at different levels. The values of all the attributes present in an instance are ANDed together to determine the validity period(s) for the instance. For example, an instance with an overall validity range of January 1, 2000 through December 31, 2000; a month mask that selects March and April; a day-of-the-week mask that selects Fridays; and a time of day range of 0800 through 1600 would represent the following time periods:

Friday, March 5, 2000, from 0800 through 1600;
Friday, March 12, 2000, from 0800 through 1600;
Friday, March 19, 2000, from 0800 through 1600;
Friday, March 26, 2000, from 0800 through 1600;
Friday, April 2, 2000, from 0800 through 1600;
Friday, April 9, 2000, from 0800 through 1600;
Friday, April 16, 2000, from 0800 through 1600;
Friday, April 23, 2000, from 0800 through 1600;
Friday, April 30, 2000, from 0800 through 1600.

Attributes not present in an instance of PolicyTimePeriodCondition are implicitly treated as having their value "always enabled". Thus, in the example above, the day-of-the-month mask is not present, and so the validity period for the instance implicitly includes a day-of-the-month mask that selects all days of the month. If we apply this "missing attribute" rule to its fullest, we see that there is a second way to indicate that a policy rule is always enabled: have it point to an instance of PolicyTimePeriodCondition whose only attributes are its naming attributes.

The attribute LocalOrUtcTime indicates whether the times represented in the other five time-related attributes of an instance of PolicyTimePeriodCondition are to be interpreted as local times for the location where a policy rule is being applied, or as UTC times.



8.1.8.1 Attributes

`CommonName : TpString`

The identifier used to distinguish instances of a give class of objects within a container. It is defined and referenced by the 'name' parameter used in most API methods.

PolicyKeywords : TpStringSet

This attribute provides a set of one or more keywords that a policy administrator may use to assist in characterizing or categorizing a policy object. Keywords are of one of two types:

- Keywords defined in the present document, or in documents that define subinterfaces of the interfaces defined in the present document. These keywords provide a vendor-independent, installation-independent way of characterizing policy objects.

- Installation-dependent keywords for characterizing policy objects. Examples include "Engineering", "Billing", and "Review in December 2000".

The present document defines the following keywords: "P_PM_KEYWORD_UNKNOWN", "P_PM_KEYWORD_CONFIGURATION", "P_PM_KEYWORD_USAGE", "P_PM_KEYWORD_SECURITY", "P_PM_KEYWORD_SERVICE", "P_PM_KEYWORD_MOTIVATIONAL", "P_PM_KEYWORD_INSTALLATION", and "P_PM_KEYWORD_EVENT". These concepts were originally defined in IETF RFC 3460.

One additional keyword is defined: "P_PM_KEYWORD_POLICY". The role of this keyword is to identify policy-related instances that would not otherwise be identifiable as being related to policy. It may be needed in some repository implementations.

Documents that define subinterfaces of the Policy Information Model interfaces SHOULD define additional keywords to characterize instances of these subinterfaces. By convention, keywords defined in conjunction with interface definitions are in uppercase. Installation-defined keywords can be in any case.

Caption : TpString

This attribute provides a one-line description of a policy-related object.

Description : TpString

This attribute provides a longer description than that provided by the caption attribute.

TimePeriod : TpString

This attribute identifies an overall range of calendar dates and times over which a policy rule is valid. It reuses the format for an explicit time period defined in RFC 2445: a string representing a starting date and time, in which the character 'T' indicates the beginning of the time portion, followed by the solidus character '/', followed by a similar string representing an end date and time. The first date indicates the beginning of the range, while the second date indicates the end. Thus, the second date and time must be later than the first. Date/times are expressed as substrings of the form "yyyymmddThhmmss". For example:

20000101T080000/20000131T120000

January 1, 2000, 0800 through January 31, 2000, noon

There are also two special cases in which one of the date/time strings is replaced with a special string defined in

RFC 2445.

- If the first date/time is replaced with the string "THISANDPRIOR", then the attribute indicates that a policy rule is valid [from now] until the date/time that appears after the '/'.

- If the second date/time is replaced with the string "THISANDFUTURE", then the attribute indicates that a policy rule becomes valid on the date/time that appears before the '/', and remains valid from that point on.

Note that RFC 2445 does not use these two strings in connection with explicit time periods. Thus the RFC 3460 is combining two elements from RFC 2445 that are not combined in the RFC itself.

MonthOfYearMask : TpString

The purpose of this attribute is to refine the definition of the valid time period that is defined by the TimePeriod attribute, by explicitly specifying the months when the policy is valid. These attributes work together, with the TimePeriod used to specify the overall time period during which the policy might be valid, and the MonthOfYearMask used to pick out the specific months within that time period when the policy is valid.

This attribute is formatted as an octet string of size 2, consisting of 12 bits identifying the 12 months of the year, beginning with January and ending with December, followed by 4 bits that are always set to '0'. For each month, the value '1' indicates that the policy is valid for that month, and the value '0' indicates that it is not valid. The value X'08 30', for example, indicates that a policy rule is valid only in the months May, November, and December.

See ~~section~~ clause 5.4 of RFC 3060 for details of how CIM represents a single-valued octet string attribute such as this one. (Basically, CIM prepends a 4-octet length to the octet string.)

If this attribute is omitted, then the policy rule is treated as valid for all twelve months.

DayOfMonthMask : TpString

The purpose of this attribute is to refine the definition of the valid time period that is defined by the TimePeriod attribute, by explicitly specifying the days of the month when the policy is valid. These attributes work together, with the TimePeriod used to specify the overall time period during which the policy might be valid, and the DayOfMonthMask used to pick out the specific days of the month within that time period when the policy is valid.

This attribute is formatted as an octet string of size 8, consisting of 31 bits identifying the days of the month counting from the beginning, followed by 31 more bits identifying the days of the month counting from the end, followed by 2 bits that are always set to '0'. For each day, the value '1' indicates that the policy is valid for that day, and the value '0' indicates that it is not valid.

The value X'80 00 00 01 00 00 00 00', for example, indicates that a policy rule is valid on the first and last days of the month.

For months with fewer than 31 days, the digits corresponding to days that the months do not have (counting in both directions) are ignored.

The encoding of the 62 significant bits in the octet string matches that used for the schedDay object in the DISMAN-SCHEDULE-MIB. See RFC ~~2445~~ 2591 for more details on this object.

See ~~section~~ clause 5.4 of RFC 3060 for details of how CIM represents a single-valued octet string attribute such as this one. (Basically, CIM prepends a 4-octet length to the octet string.)

DayOfWeekMask : TpString

The purpose of this attribute is to refine the definition of the valid time period that is defined by the TimePeriod attribute by explicitly specifying the days of the week when the policy is valid. These attributes work together, with the TimePeriod used to specify the overall time period when the policy might be valid, and the DayOfWeekMask used to pick out the specific days of the week in that time period when the policy is valid.

This attribute is formatted as an octet string of size 1, consisting of 7 bits identifying the 7 days of the week, beginning with Sunday and ending with Saturday, followed by 1 bit that is always set to '0'. For each day of the week, the value '1' indicates that the policy is valid for that day, and the value '0' indicates that it is not valid.

The value X'7C', for example, indicates that a policy rule is valid Monday through Friday.

See ~~section~~ clause 5.4 of RFC 3060 for details of how CIM represents a single-valued octet string attribute such as this one. (Basically, CIM prepends a 4-octet length to the octet string.)

TimeOfDayMask : TpString

The purpose of this attribute is to refine the definition of the valid time period that is defined by the TimePeriod attribute by explicitly specifying a range of times in a day the policy is valid for. These attributes work together, with the TimePeriod used to specify the overall time period that the policy is valid for, and the TimeOfDayMask used to pick out which range of time periods in a given day of that time period the policy is valid for.

This attribute is formatted in the style of RFC 2445: a time string beginning with the character 'T', followed by the solidus character '/', followed by a second time string. The first time indicates the beginning of the range, while the second time indicates the end. Times are expressed as substrings of the form "Thhmmss".

The second substring always identifies a later time than the first substring. To allow for ranges that span midnight, however, the value of the second string may be smaller than the value of the first substring. Thus, "T080000/T210000" identifies the range from 0800 until 2100, while "T210000/T080000" identifies the range from 2100 until 0800 of the following day.

When a range spans midnight, it by definition includes parts of two successive days. When one of these days is also selected by either the MonthOfYearMask, DayOfMonthMask, and/or DayOfWeekMask, but the other day is not, then the policy is active only during the portion of the range that falls on the selected day. For example, if the range extends from 2100 until 0800, and the day of week mask selects Monday and Tuesday, then the policy is active during the following three intervals:

From midnight Sunday until 0800 Monday;

From 2100 Monday until 0800 Tuesday;

From 2100 Tuesday until 23:59:59 Tuesday.

`LocalOrUtcTime : TpInt32`

This attribute indicates whether the times represented in the TimePeriod attribute and in the various Mask attributes represent local times or UTC times. There is no provision for mixing of local times and UTC times: the value of this attribute applies to all of the other time-related attributes. Note that LocalTime is designated by the integer 1 and UtcTime by the integer 2. If no value is specified the default value is 2, i.e., UtcTime is used.

End of change in Clause 8.1.8

Annex D (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
April 2002	--	--	--	--	Draft v100 submitted to TSG CN email list for Information	--	1.0.0
June 2002	CN_16	NP-020195	--	--	Draft v200 submitted to TSG CN#16 for Approval	2.0.0	5.0.0
Sep 2002	CN_17	NP-020439	001	--	Add text to clarify requirements on support of methods	5.0.0	5.1.0
Sep 2002	CN_17	NP-020395	002	--	Add text to clarify relationship between 3GPP and ETSI/Parlay OSA specifications	5.0.0	5.1.0
Jun 2003	CN_20	NP-030250	003	--	New Policy Evaluation SCF introduced	5.1.0	6.0.0
Dec 2003	CN_22	NP-030553	005	--	Add OSA API support for 3GPP2 networks	6.0.0	6.1.0
Dec 2003	CN_22	NP-030548	007	--	Correction of standard datatypes supported by TpPolicy - Align with 29.198-02	6.0.0	6.1.0
Sep 2004	CN_25	NP-040354	010	--	Introduce Java Realisation Annex	6.1.0	6.2.0
Sep 2004	CN_25	NP-040358	012	--	Support High Availability at API Level	6.1.0	6.2.0
Dec 2004	--	--	--	--	OSA Stage 1 & 2 References clean-up	6.2.0	6.2.1
Dec 2004	--	--	--	--	Some figures were not visible (deleted 2/3 SoDAError bookmarks)	6.2.1	6.2.2